

AMENDMENTS TO THE CLAIMS:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Currently Amended) A system as recited in claim 5, for managing licenses for protected software on a communication network, the system comprising:

at least one client computer coupled to the communication network for requesting authorizations to use the protected software; and

a pool of license servers coupled to the communication network, each license server programmed for managing a distribution of one or more allocations to at least one client computer to use the protected software and for maintaining a record of distribution, the pool of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool;

wherein the pool of license servers includes at least one follower server;

wherein each follower server is programmed such that it is capable of becoming a new leader server if the current leader server can no longer manage the distribution of allocations for the license servers, and wherein upon selecting a new leader server from the pool, the new leader server is further programmed for receiving from each license server the record of distribution for that license server,

wherein the license servers within the pool are programmed for communicating with each other and determining when a particular license server can no longer manage a distribution of allocations to use the protected software,

wherein each client computer that has received an authorization from a particular license server, and the particular license server that sent the authorization to the client computer, are programmed for communicating heartbeats between each other; and

wherein each client computer that has received an authorization from a particular license server is programmed for determining based on communication of the heartbeats whether that particular license server is still capable of managing a distribution of allocations to use the protected software.

8. (Original) A system as recited in Claim 7, wherein each client computer that has received an authorization from a particular license server but has determined that particular license server is no longer capable of managing a distribution of allocations to use the protected software is programmed for:

locating a new leader server; and

communicating a heartbeat from the client computer to the new leader server.

9. (Original) A system as recited in Claim 8, wherein if the new leader server receives a heartbeat from a client computer that has located the new leader server, the new leader server is programmed for:

determining if the new leader server had already issued an authorization to the client computer; and

converting the heartbeat to a request for an authorization if the new leader server had not already issued an authorization to the client computer.

10. (Currently Amended) A system as recited in claim 5, for managing licenses for protected software on a communication network, the system comprising:

at least one client computer coupled to the communication network for requesting authorizations to use the protected software; and

a pool of license servers coupled to the communication network, each license server programmed for managing a distribution of one or more allocations to at least one client computer to use the protected software and for maintaining a record of distribution, the pool

of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool;

wherein the pool of license servers includes at least one follower server;

wherein each follower server is programmed such that it is capable of becoming a new leader server if the current leader server can no longer manage the distribution of allocations for the license servers; and wherein upon selecting a new leader server from the pool, the new leader server is further programmed for receiving from each license server the record of distribution for that license server,

wherein the pool of license servers ~~are~~ is programmed for communicating with each other and determining when a particular license server can no longer manage a distribution of allocations to use the protected software,

each license server ~~further~~ including memory for storing a license file and sequence number;

wherein if a particular license server is no longer capable of managing a distribution of allocations to use the protected software, the memory in the particular license server is capable of receiving a new redundant license file and a new sequence number; and

wherein if the particular license server is brought back on line and if the new sequence number is greater than any sequence number currently stored in the memory of the other license servers in the pool, the particular license server and the other license servers in the pool are programmed for transferring the new redundant license file to other license servers in the pool.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) A method ~~as recited in claim 14~~, for managing licenses for protected software on a communication network, the method comprising:

coupling at least one client computer to the communication network for enabling the at least one client computer to issue a request for an authorization to use the protected software over the communication network;

coupling a pool of license servers to the communication network, each license server managing a distribution of allocations to at least one client computer to use the protected software and managing a record of allocations;

selecting one of the license servers in the pool as a current leader server and maintaining a record of allocations for license servers in the pool with the current leader server;

designating other license servers that are not the current leader server as follower servers;

selecting one of the follower servers as a new leader server whenever the current leader server can no longer manage the distribution of allocations for the license servers,

transmitting the record of allocations for each license server to the new leader server;

determining, by communications between the pool of license servers, when a particular license server can no longer manage a distribution of allocations to use the protected software;

communicating heartbeats between client computers that have received an authorization from a particular license server and that particular license server; and

determining, for each client computer that has received an authorization from a particular license server, if that particular license server is still capable of managing a distribution of allocations to use the protected software.

17. (Original) A method as recited in claim 16, wherein for each client computer that has received an authorization from a particular license server but has determined that particular

license server is no longer capable of managing a distribution of allocations to use the protected software, the method further includes the steps of:

locating the new leader server; and

communicating a heartbeat from the client computer to the new leader server.

18. (Original) A method as recited in claim 17, wherein if the new leader server receives a heartbeat from a client computer that has located the new leader server, the method further includes the steps of:

determining if the new leader server had already issued an authorization to the client computer; and

converting the heartbeat to a request for an authorization if the new leader server had not already issued an authorization to the client computer.

19. (Currently Amended) A method ~~as recited in claim 14~~, for managing licenses for protected software on a communication network, the method comprising:

coupling at least one client computer to the communication network for enabling the at least one client computer to issue a request for an authorization to use the protected software over the communication network;

coupling a pool of license servers to the communication network, each license server managing a distribution of allocations to at least one client computer to use the protected software and managing a record of allocations;

selecting one of the license servers in the pool as a current leader server and maintaining a record of allocations for license servers in the pool with the current leader server;

designating other license servers that are not the current leader server as follower servers;

selecting one of the follower servers as a new leader server whenever the current leader server can no longer manage the distribution of allocations for the license servers,
transmitting the record of allocations for each license server to the new leader server;
determining, by communications between the pool of license servers, when a particular license server can no longer manage a distribution of allocations to use the protected software;

storing a redundant license file and sequence number within each license server;

storing a new redundant license file and a new sequence number in a particular license server that is no longer capable of managing a distribution of allocations to use the protected software;

restoring functionality to the particular license server that was no longer capable of managing a distribution of allocations to use the protected software; and

transferring the new redundant license file to other license servers in the pool if the new sequence number is greater than any sequence number currently stored in any other license server in the pool.

20. (Cancelled)

21. (Currently Amended) A system as recited in claim [[4]] 7, wherein the current leader server is programmed for communicating a heartbeat to each follower server;

wherein each follower server is programmed for communicating an acknowledgement to the current leader server in response to the heartbeat; and

wherein the current leader server designates a follower server as being down if no acknowledgement is received from that follower server.

22. (Currently Amended) A system as recited in claim [[4]] 7, wherein the current leader server is programmed for communicating a heartbeat to each follower server;

wherein if a follower server does not receive the heartbeat from the current leader, then the follower server that did not receive the heartbeat sends a check message to the current leader; and

wherein if the follower server that did not receive the heartbeat does not receive a response from the current leader in reply to the check message, then the follower server that did not receive the heartbeat starts an election process to elect a new current leader.

23. (Currently Amended) A system as recited in claim [[4]] 7, wherein if a follower server becomes the new leader server, then the new leader server sends a heartbeat to each of the remaining follower servers; and
wherein each of the remaining follower servers communicates the status of the allocations for that particular follower server to the new leader server.

24. (Cancelled)

25. (Cancelled)

26. (Previously Presented) A system for managing licenses for protected software on a communication network, the system comprising:

at least one client computer coupled to the communication network for requesting authorizations to use the protected software; and

a pool of license servers coupled to the communication network, each license server programmed for managing a distribution of one or more allocations to at least one client computer to use the protected software, the pool of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool;

wherein the pool of license servers includes at least one follower server;

wherein each follower server is programmed such that it is capable of becoming a new leader server if the current leader server can no longer manage the distribution of allocations for the license servers;

wherein the pool of license servers is programmed for communicating with each other and determining when a particular license server can no longer manage a distribution of allocations to use the protected software;

wherein each client computer that has received an authorization from a particular license server, and the particular license server that sent the authorization to the client computer, are programmed for communicating heartbeats between each other;

wherein each client computer that has received an authorization from a particular license server also receives a leader priority list from that particular license server;

wherein each client computer that has received an authorization from a particular license server is programmed for determining whether that particular license server is still capable of managing a distribution of allocations to use the protected software; and

wherein each client computer that has received an authorization from a particular license server but has determined that particular license server is no longer capable of managing a distribution of allocations to use the protected software is programmed for locating another license server by using the leader priority list.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Currently Amended) A method as recited in claim [[14]] 19, further including the steps of:

communicating heartbeats between client computers that have received an authorization from a particular license server and that particular license server;

communicating a leader priority list from license servers to the client computers to which they send authorizations;

determining, for each client computer that has received an authorization from a particular license server, if that particular license server is still capable of managing a distribution of allocations to use the protected software; and

locating, for each client computer that has received an authorization from a particular license server but has determined that particular license server is no longer capable of managing a distribution of allocations to use the protected software, another license server by using the leader priority list.

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Currently Amended) A system as recited in claim [[4]] 7, wherein upon receipt of the record of distribution from each license server, the new leader is programmed for amending its record of distribution to include the record of distribution for each license server such that a new record of allocations for the license servers in the pool is created on the new leader.